SYLLABUS PLS 306 Fall 2016

Crop Science and Production
Hybrid Course
Friday 12:00pm – 2:50 pm*, and online using D2L

Instructor: Dr. Jeffrey C. Silvertooth

Office Hours: available by appointment
Contact Kristie Gallardo for an appointment scheduling
gallardo@cals.arizona.edu

Dr. Silvertooth (office)
Forbes 301
520-621-7145
520-621-1314 (fax)

Frank Santiago fvs@email.arizona.edu

Teaching Assistants: Sarah Land sarahland@email.arizona.edu
Brad Martin bmartin030@email.arizona.edu

Course Objective: Develop an understanding of the basic principles associated with crop production systems. Fundamental agronomic concepts and practices will be presented, discussed, and demonstrated.

Prerequisites: PLS 240 and SWES 200


Class Notes: Class notes and presentation materials will be posted on the class D2L site as a ppt. file.

Location: This course is a hybrid online and in person course. Accessibility to D2L is imperative for success in this course. All lecture material, quizzes, and exams will be online.

*Discussions will be every Friday to discuss major course topics, conduct student discussions, and have guest speakers from 12:00 to 2:50 P.M., Marley 230.

*Friday sessions will also be used for lab sessions (Fridays 12:00 to 5:00 P.M.) Most labs are in the field (see attached schedule).
Supplemental and Recommended References: Refer to reference listings provided.

Drop Policy: Students withdrawing from this course must notify the instructor prior to non-attendance in classes and execute drop or withdrawal procedures in accordance with the UA General Catalog. Any student failing to attend class in two or more successive classes is subject to instructor-initiated withdrawal, if arrangements have not been made between student and instructor.

Incomplete Policy: Any incomplete grade given must be verified with a written agreement with the student that specifies the work to be done and the timetable of completion.

Academic Integrity: Students are encouraged to share intellectual views and discuss freely the principles and applications of the course materials. However, graded laboratory and homework exercises must be executed independently, except as noted by the instructor. This course operates under the UA academic policies as described in the UA Arizona Record 98-99 General Academic Manual.

Classroom Behavior: Cheating will not be tolerated. Anyone caught cheating will receive an F (E) in this course.

Policy regarding use of cell phones/pagers follows The Arizona Board of Regents’ Student Code of Conduct, ABOR Policy 5-308. This also prohibits threats of physical harm to any member of the University community, including to one’s self. See: http://policy.web.arizona.edu/threatening-behavior-students

Professional and respectful behavior is expected for all students in both the classroom and in the field. Any student that fails to comply with professional behavior standards will be provided one warning from the instructor and any subsequent behavior problems will warrant an E for the course.

Threatening Behavior Policy: The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students.

Accessibility and Accommodations: Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let me know immediately so that we can discuss options. You are also welcome to contact the
Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional information on the Disability Resource Center and reasonable accommodations, please visit http://drc.arizona.edu.

If you have reasonable accommodations, please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable

**Student Code of Academic Integrity:** Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity.

**Confidentiality of Students Records:** http://www.registrar.arizona.edu/ferpa/default.htm

**Nondiscrimination and Anti-harassment policy:** The University is committed to creating and maintaining an environment free of discrimination; see: http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

**Absence and Class Participation Policy:** The UA’s policy concerning Class Attendance, Participation, and Administrative Drops is available at http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable: http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Absences preapproved by the UA Dean of Students (or dean’s designee) will be honored. See https://deanofstudents.arizona.edu/absences

**Subject to Change Statement:** Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.
Additional Notes:

1. No make-ups on exams unless under emergency conditions.
2. The laboratory portion of the class is field-oriented. All students will be expected to participate in all field trips, which will include one weekend trip to the Yuma area (two nights out). The Yuma/Mexicali is optional for all students.
3. Exams will consist of problems, essays, matching, and multiple choices.
4. The final exam is not cumulative.
5. Final points will be calculated and grades will be determined by class distribution. Students earning a 90% average grade or better will be assured an A, 80% a B, etc. The required total points for a specific letter grade may be lower than stated here, however, this will be determined by the instructors.
6. Cheating will not be tolerated. Anyone caught cheating will receive an E in this course.
Grading System PLS 306

Exams 240 points
- The first two exams are required in the course (85 points each), while the third exam/final will be OPTIONAL (70 points)

Writing Assignments 210 points (follow the template/outline explicitly)
- One Page summaries of assigned supplemental reading, see page 6 for full description
- Due PRIOR to start of class at 12:00 pm in the D2L Dropbox folder (Late submissions and paper copies will not be accepted)

Weekly Quizzes 250 points
- Quizzes open at 3:00pm directly after class ends
- Quizzes remain open all week, and students will receive 2 attempts on the quiz.
  - To receive the 2nd attempt, a student must receive at least a 70% on attempt one of the quiz.
- Quizzes close at 12:00pm prior to the start of class
- Students will have one hour to complete a quiz on all of the topic material from the text and lectures that week.

In Class / Discussion Session Requirements 100 points
Each week you are required the following for the Face to Face and In-Class portion
- Read online papers and prepare to discuss with class (attendance taken for credit)
- Bring your own questions on the material
- Be fully prepared to be called upon to stand and respond to the questions you are presented with from the instructors.
- Participate in Field Experiences throughout the semester

Laboratory/ Field Notebook 250 points
- 3 Field trips at 50 points each (25 for participation, 25 for notebook)
- 1 Field trip at 100 points (75 for participation, 25 for notebook)
  - Alternative assignments can be arranged for those unable to attend last field trip.
- Notebooks will be due throughout the semester, and a final notebook will be submitted in its entirety at the end of term.
- Participation points (25 points participation received by)
  - completing 10 questions from the Question Outline found on D2L.
  - These will not be printed for you, you must bring your own to the field trip.
  - They will be collected upon return to the University immediately after the corresponding field trip.
  - They will be returned/ graded the following Friday in class, and are expected to be included within your field notebooks
- Notebook points (25 points for notebook received by)
  - Turning in a hard copy of your
    - Graded field trip question outline + Completed Field Report and notebook section
    - Additional information you gathered on the trip
Total Points  950 pts.

<table>
<thead>
<tr>
<th>Category</th>
<th>Points</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>240</td>
<td>23</td>
</tr>
<tr>
<td>Writing Assignments</td>
<td>210</td>
<td>20</td>
</tr>
<tr>
<td>Field Notebooks</td>
<td>250</td>
<td>24</td>
</tr>
<tr>
<td>Weekly Quizzes</td>
<td>250</td>
<td>24</td>
</tr>
<tr>
<td>Class Participation</td>
<td>100</td>
<td>10</td>
</tr>
</tbody>
</table>

TOTAL  1050

Final Grades: guaranteed highest breaks:
- 945 points or ≥ 90%  A
- 840 points or ≥ 80%  B
- 735 points or ≥ 70%  C
- 630 points or ≥ 60%  D
- < 60%  F or E
Important Dates & Tentative PL S 306 Lab Schedule Fall 2016

Lecture/discussion sessions: Fridays, 12:00 to 2:50 P.M., Marley 230

Lab Schedules: 12:00 P.M. to 5:00 P.M. Fridays – as indicated (lab schedule may be subject to change)

**HOLIDAYS**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 August</td>
<td>First day of classes</td>
</tr>
<tr>
<td>5 September</td>
<td>Labor Day – No classes</td>
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<tr>
<td>11 November</td>
<td>Veterans Day – No classes</td>
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<tr>
<td>24-27 November</td>
<td>Thanksgiving Break – No classes</td>
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</tbody>
</table>

**EXAM SCHEDULE**

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
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<tbody>
<tr>
<td>Exam I</td>
<td>30 September</td>
</tr>
<tr>
<td>Exam II</td>
<td>28 October</td>
</tr>
<tr>
<td>Exam III</td>
<td>9 December</td>
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</tbody>
</table>

**FIELD TRIP SCHEDULE**

<table>
<thead>
<tr>
<th>Field Trip</th>
<th>Date</th>
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<tbody>
<tr>
<td>Pinal County- Cotton Production</td>
<td>2 September</td>
</tr>
<tr>
<td>Cochise County – Chile Production</td>
<td>7 October</td>
</tr>
<tr>
<td>Green Valley – Pecan Orchards</td>
<td>4 November</td>
</tr>
<tr>
<td>Yuma / Mexicali Valley</td>
<td>18 November – 20 November</td>
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</tbody>
</table>

**FIELD NOTEBOOK DUE DATES**

<table>
<thead>
<tr>
<th>Field Trip</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes Pinal County- Cotton Production</td>
<td>16 September</td>
</tr>
<tr>
<td>Includes Pinal County- Cotton Production &amp; Cochise County – Chile Production</td>
<td>21 October</td>
</tr>
<tr>
<td>Includes Pinal County- Cotton Production &amp; Cochise County – Chile Production, and Green Valley – Pecan Orchards</td>
<td>17 November (Thursday before MX fieldtrip)</td>
</tr>
<tr>
<td>Includes Pinal County- Cotton Production &amp; Cochise County – Chile Production, Green Valley – Pecan Orchards, and Yuma / Mexicali Valley</td>
<td>2 December</td>
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**NOTE:**

18 November through 20 November (Friday - Sunday)
- Field Trip to Paloma Ranch, Yuma Valley, and Mexicali Valley (Baja California, Mexico)
- Depart from Marley Bldg. **12:00 Noon**, Friday, 18 November
- **The Yuma area field trip IS OPTIONAL and includes an excursion into Mexico.** Passports will be necessary for all students. Foreign students should bring their passports with complete student visa documentation materials for re-entry in the U.S.
Yuma Students

Comparable/alternate field trips and field activities will be coordinated for the Yuma students. The schedule for these first three Yuma field trips will be provided.

All Yuma students will be included with Tucson group for the Yuma/Mexicali Valley field trip as a full class group.

PLS 306 Writing Assignments

This course includes a series of writing assignments. These assignments will be provided to the students over the course of the semester with specific instructions associated with each.

For each writing assignment all students will be expected to provide original work and appropriate references.

Writing assignments will be submitted by students electronically by d2l dropbox. Failure to turn in assignment via D2L without prior contact of TA’s will result in penalty on assignment.

On-Line Postings of Course Materials

This is a hybrid course, and the use of D2L site is required for the course. All students are expected to maintain contact with this site on a regular basis for access to course-related materials and communications from the instructor.

All lecture materials, quizzes, and exams will be posted on the D2L site.

Writing assignments, reference materials, quiz and exam keys, and field trip information will be posted on the D2L site for student access.
References


<table>
<thead>
<tr>
<th>Week</th>
<th>Chapter</th>
<th>Date</th>
<th>Online Topic</th>
<th>Weekly Assignment/ Discussion Topic</th>
<th>Quiz Online</th>
<th>Exams</th>
<th>Field Trips</th>
<th>Assignment Due In Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Aug 22-26</td>
<td>Introduction</td>
<td></td>
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<td>2</td>
<td>1</td>
<td>Aug 29-Sept2</td>
<td>The Art and Science of Crop Production</td>
<td>Land Grant Institution</td>
<td>Due Aug. 26</td>
<td></td>
<td></td>
<td>Pinal County Cotton</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>Sept 5-9</td>
<td>Crop Plants in Relation to the Environment</td>
<td>The Green Revolution; The spread of agriculture</td>
<td>Due Sept. 9</td>
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<td></td>
<td>1 page summary</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>Sept 12-16</td>
<td>Botany of Crop Plants</td>
<td>Food for 9B – Nat. Geo.</td>
<td>Due Sept. 16</td>
<td></td>
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<td>1 page summary, and field notebook</td>
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<tr>
<td>5</td>
<td>4</td>
<td>Sept 19-23</td>
<td>Crop Improvement</td>
<td>Feeding the World – Six Major Challenges</td>
<td>Due Sept. 23</td>
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<td>1 page summary</td>
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<td>6</td>
<td>-</td>
<td>Sept 26-30</td>
<td></td>
<td></td>
<td>Exam 1</td>
<td></td>
<td></td>
<td>No Class Exam Online</td>
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<tr>
<td>7</td>
<td>5</td>
<td>Oct 3-7</td>
<td>Tillage Practices</td>
<td>What is a transgenic plant?</td>
<td>Due Oct. 7</td>
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<td>Cochise County Chile</td>
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<tr>
<td>8</td>
<td>6</td>
<td>Oct 10-14</td>
<td>Fertilizer, Green Manuring, Rotation, and Multiple cropping Practices</td>
<td>The New Harvest &amp; The Plant Engineer</td>
<td>Due Oct. 14</td>
<td></td>
<td></td>
<td>1 page summary</td>
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<tr>
<td>9</td>
<td>7</td>
<td>Oct 17-21</td>
<td>Seeds and Seeding</td>
<td>The N Fix</td>
<td>Due Oct. 21</td>
<td></td>
<td></td>
<td>1 page summary, and field notebook</td>
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<tr>
<td>10</td>
<td>8</td>
<td>Oct 24-28</td>
<td></td>
<td></td>
<td>Exam 2</td>
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<td></td>
<td>No Class Exam Online</td>
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<tr>
<td>11</td>
<td>-</td>
<td>Oct 31-Nov 4</td>
<td>Harvest of Field Crops</td>
<td>The Process of Genetic Modification</td>
<td>Due Nov 4</td>
<td></td>
<td></td>
<td>Green Valley Pecan Orchards</td>
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<tr>
<td>12</td>
<td>11</td>
<td>Nov 7-11</td>
<td>Weeds and their Control</td>
<td>No class on the 11th</td>
<td>Due Nov. 10</td>
<td></td>
<td></td>
<td>1 page summary</td>
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<tr>
<td>13</td>
<td>-</td>
<td>Nov 14-18</td>
<td></td>
<td></td>
<td>Yuma/Mexico Trip</td>
<td></td>
<td></td>
<td>1 page summary</td>
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<tr>
<td>14</td>
<td></td>
<td>Nov 21-25</td>
<td></td>
<td></td>
<td>No Class Nov 25- Thanksgiving Break</td>
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<tr>
<td>15</td>
<td></td>
<td>Nov 28-Dec2</td>
<td>Crop-water relations/ Agro-ecology</td>
<td></td>
<td>Due Dec. 2</td>
<td></td>
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<tr>
<td>16</td>
<td></td>
<td>Dec -</td>
<td>Final Examinations</td>
<td></td>
<td>Exam 3</td>
<td></td>
<td></td>
<td>Field notebook due Dec. December</td>
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